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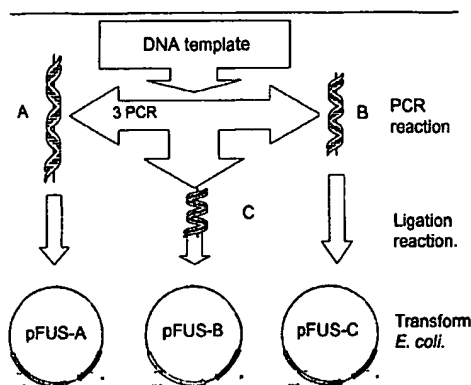
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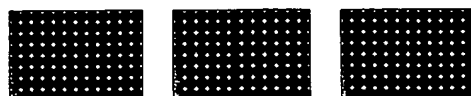
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(54) Title: SOLUBLE RECOMBINANT PROTEIN PRODUCTION



Each target insert is ligated into various vectors and transformed into hosts eg *E. coli*. Typically, at least 3 inserts are designed for each target protein, each of which is ligated into 4 vectors on separate transformant plates. 24 clones from each transformant plate (i.e. total of 288 clones) are then propagated.

Flow chart of the fusion antibodies
high-throughput process

(57) Abstract: Described is a method of producing a soluble bioactive domain of a protein, the method comprising the step of selecting suitable soluble subunits of a protein and assessing the produced protein for desired activity. The method may comprise the steps of amplifying DNA encoding at least one candidate soluble domain, cloning the amplified DNA into at least one expression vector, using each of said vectors into which the DNA has been cloned to each transfect or transform one or more host cell strains, expressing said DNA in one or more host cell strains, and analysing expression products from said host cells for solubility.



Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK,
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, EMBASE, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>TON-THAT HUNG ET AL: "Purification and characterization of sortase, the transpeptidase that cleaves surface proteins of Staphylococcus aureus at the LPXTG motif."</p> <p>PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 96, no. 22, 26 October 1999 (1999-10-26), pages 12424-12429, XP002253866</p> <p>Oct. 26, 1999</p> <p>ISSN: 0027-8424</p> <p>the whole document</p> <p style="text-align: center;">-/-</p>	<p>1-26, 31-34, 40-43</p>



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>ILANGO VAN UDAYAR ET AL: "Structure of sortase, the transpeptidase that anchors proteins to the cell wall of <i>Staphylococcus aureus</i>."</p> <p>PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 98, no. 11, 22 May 2001 (2001-05-22), pages 6056-6061, XP002253867</p> <p>May 22, 2001</p> <p>ISSN: 0027-8424</p> <p>the whole document</p>	<p>1-26, 31-34, 40-43</p>
X	<p>DAVIS GREGORY D ET AL: "New fusion protein systems designed to give soluble expression in <i>Escherichia coli</i>"</p> <p>BIOTECHNOLOGY AND BIOENGINEERING. INCLUDING: SYMPOSIUM BIOTECHNOLOGY IN ENERGY PRODUCTION AND CONSERVATION, JOHN WILEY & SONS. NEW YORK, US, vol. 65, no. 4, 1999, pages 382-388, XP002192026</p> <p>ISSN: 0006-3592</p> <p>the whole document</p>	<p>1-26</p>
X	<p>ZHANG Y ET AL: "EXPRESSION OF EUKARYOTIC PROTEINS IN SOLUBLE FORM IN <i>ESCHERICHIA COLI</i>"</p> <p>PROTEIN EXPRESSION AND PURIFICATION, ACADEMIC PRESS, US, vol. 12, 1998, pages 159-165, XP000984417</p> <p>ISSN: 1046-5928</p> <p>the whole document</p>	<p>1-26</p>
X	<p>PRYOR K D ET AL: "HIGH-LEVEL EXPRESSION OF SOLUBLE PROTEIN IN <i>ESCHERICHIA COLI</i> USING A HIS6-TAG AND MALTOSE-BINDIN-PROTEIN DOUBLE-AFFINITY FUSION SYSTEM"</p> <p>PROTEIN EXPRESSION AND PURIFICATION, ACADEMIC PRESS, US, vol. 10, no. 3, August 1997 (1997-08), pages 309-319, XP000891558</p> <p>ISSN: 1046-5928</p> <p>the whole document</p>	<p>1-26</p>